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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/073,987	02/14/2002	Keiji Sakata	36856.622	4982

7590 02/27/2003

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Fairfax, VA 22030

EXAMINER
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NGUYEN, TUYEN T

ART UNIT	PAPER NUMBER
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2832

DATE MAILED: 02/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/073,987

Applicant(s)

Keiji

Examiner

Tuyen T. Nguyen

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on Jan 27, 2003
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above, claim(s) 4-6, 8, 9, 11, 17, and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7, 10, 12-16, and 18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some\* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_                      6) ☐ Other:

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## DETAILED ACTION

### *Election/Restriction*

1. Applicant's election without traverse of claims 1-3, 7, 8, 10, 12-16, 18 and 19 in Paper No. 7 is acknowledged.
2. Claims 4-6, 9, 11, 17 and 19 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made without traverse in Paper No. 7. Claim 19 do not read on the elected species of figure 1.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:  

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 1-3, 7, 8, 10, 12-16, 18 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, applicant should clarify what is intended by "the coil includes at least two kinds of the coil conductor patterns *which have a different number of turns.*" Claims 2-3 , 7, 8, 10, 12-16, 18 and 19 inherit the defect of the parent claim.

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***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3, 8, 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Person et al. [US 5,880,662] in view of Williams [US 4,873,757].

Person et al. discloses a laminated inductor [figure 3] comprising:

- a plurality of insulating layers [46, 54];
- a plurality of vias [48, 56] disposed in the insulating layers; and
- a plurality of spiral conductor patterns [52, 60] having at least one turn disposed on the insulating layers and being stacked on each other in a lamination direction with the insulating layers disposed therebetween,

wherein the plurality of spiral conductor patterns being connected in series to define a coil and the coil includes at least two kinds of the spiral conductor patterns.

Person et al. discloses the instant claimed invention except for the coil conductor patterns having *a different number of turns*.

Williams discloses a multilayer coil including a plurality of conductor patterns [figures 2-17] having different number of turns disposed on insulating layers.

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It would have been obvious to one having ordinary skilled in the art at the time the invention was made to use different turn number design of Williams in Person et al. for the purpose of controlling the inductance.

Regarding claim 3, Person et al. discloses the instant claimed invention except for the specific arrangement of the conductor patterns.

Williams discloses the coil conductor patterns having a greater number of turns arranged at an outer portion of the coil so as to sandwich the coil conductor patterns having a smaller number of turns in the lamination direction of the insulating layers.

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to use the conductor pattern arrangement of Williams in Person et al. for the purpose of optimizing the inductance.

Regarding claim 16, Person et al. further discloses cover insulating layers disposed at a top surface and a bottom surface of the laminated body.

7. Claims 7, 10 and 12-15 rejected under 35 U.S.C. 103(a) as being unpatentable over Person et al. in view of Williams as applied to claim 1 above, and further in view of Grandmont et al. [US 5,781,093].

Person et al. in view of Williams discloses the instant claimed invention except for the specific conductor design/arrangement.

Grandmont et al. discloses a winding structure [figure 2] for an induction device comprising:

- a plurality of insulating layers [12, 14, 16];

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- a plurality of conductive patterns [12a, 14a],

wherein one of the conductive patterns [12a] having a two turns design and the other conductive pattern [14a] having a one turn design and a pattern width of the one turn conductive pattern is *substantially* equal to a total pattern width of the two turns conductive pattern.

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to use the winding construction of Grandmont et al. in Person et al., as modified, for the purpose of reducing heat generation.

#### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Tuyen T. Nguyen whose telephone number is (703) 308-0821.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Elvin Enad, can be reached at (703) 308-7619. The fax number for this Group are (703) 308-7722 and (703) 308-7724.

Any inquiry of a general nature or relating to status of this application of proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

TTN *TTN*

February 24, 2003

*Tuyen T. Nguyen*